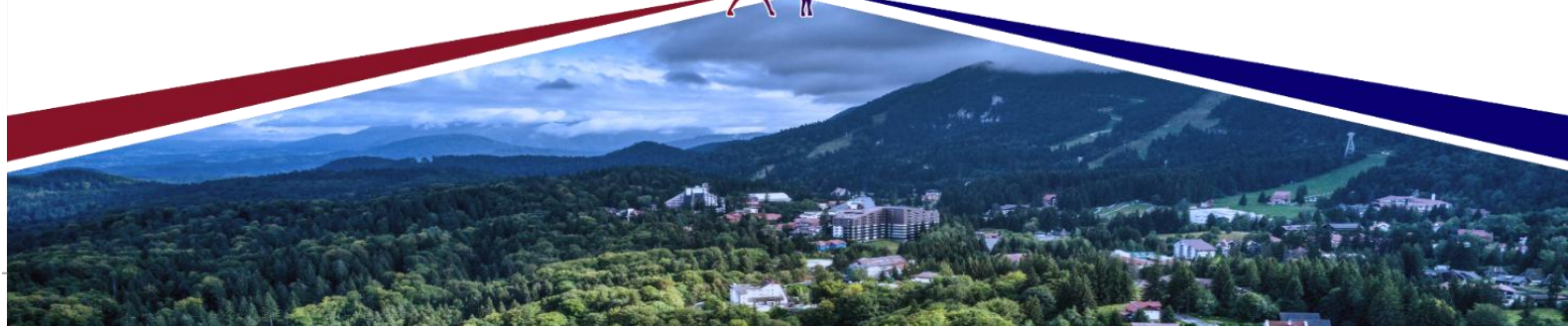




3rd International Conference on Laser, Plasma and Radiation – Science and Technology

FINAL ANNOUNCEMENT AND PROGRAMME

**29 June – 3 July 2026
Poiana Brasov - Romania**



ORGANIZED BY

**National Institute for Laser, Plasma
and Radiation Physics**

in partnership with

**Laser, Plasma and Radiation – Science and
Technology Association**



SPONSORED BY



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GENERAL INFORMATION

The 3rd International Conference on Laser, Plasma and Radiation – Science and Technology (ICLPR-ST 2026) will be held from **29 June to 3 July 2026** at Alpin Resort Hotel, Poiana Brasov, Romania. The conference continues the scientific tradition initiated by previous editions, offering an international forum for researchers, academics, and industry representatives working in laser science, plasma physics, radiation technologies, optics, photonics, and related interdisciplinary fields. The event aims to encourage scientific exchange, present recent advances in fundamental and applied research, and strengthen collaboration between research institutions, universities, and industry.

The 3rd ICLPR-ST also marks a special milestone, namely **the 30th anniversary of the National Institute for Laser, Plasma and Radiation Physics (INFLPR)** as a national research and development institute. This occasion celebrates three decades of scientific excellence, technological innovation, and international collaboration, while reaffirming INFLPR's mission to advance fundamental and applied research in photonics, plasma physics, radiation technologies, and space-related sciences. Looking ahead, the Institute remains committed to developing innovative solutions for societal challenges, strengthening European research partnerships, and inspiring the next generation of scientists and engineers.

CONFERENCE PROGRAMME

The conference programme includes plenary and invited lectures, oral presentations and poster contributions. The time allocated for presentations is as follows:

- Plenary lectures - 45 min (40 min presentation + 5 min discussion)
- Invited Lectures - 30 min (27 min presentation + 3 min discussion)
- Oral Presentations - 15 min (13 min presentation + 2 min discussion)



The **Poster Sessions** are organized on Tuesday, June 30th, 16:30 – 18:00, and Thursday, July 2nd, 16:15 – 17:45, in the Carpathian Hall. The recommended poster size is A0 (841 x 1189 mm), portrait orientation. You are kindly requested to set-up the posters in the day of the scheduled session, and to remove them immediately after the end of the poster session.

All the abstracts with at least one registered participant are included in the Book of abstracts (ISSN: 2821-7101; ISSN-L: 2821-7101), available in [electronic format](#) on conference website, as well as on a memory stick that will be distributed to each participant.

A dedicated space in the Alpin Resort Hotel lobby is hosting the **Sponsors Exhibition** during the whole duration of the conference.

Conference Awards for Young Scientists

Young Scientist Prizes will be awarded for **the best oral and poster presentations** delivered by MSc and PhD students. Presentations will be evaluated by a committee composed of the session chairs. The evaluation will consider the scientific quality of the work, the presenter's knowledge of the topic and ability to answer questions, and the overall quality of the presentation. **Participation in the poster pitch session is required to be eligible for a poster award.**

INNOVATION WORKSHOP

In the period **30 June – 2 July, 2026** takes place the **1st Workshop on National Innovation Ecosystems for Microelectronics and Photonics**, organized by INFLPR, as an associated event to the conference. The participants will disseminate technological development activities undertaken between research institutes and companies with innovation activities from Romania and abroad, partners from the National Platform for Semiconductor Technologies (PNTS) Project – SMIS Code 351364, Contract no. G 2024-85828/390008/27.11.2024.

All participants to ICLPR-ST conference are welcome to attend the Workshop sessions, the workshop programme being available at the registration desk and on the associated [website](#).

REGISTRATION

The registration desk will be situated in front of the **Carpathian Hall**, in the vicinity of the Tosca restaurant. The conference materials are distributed to all conference participants (except of accompanying persons), regardless their choice for one or multiple events.

Registration desk will be open according to the following schedule:

- | | | | | | |
|---|----------------|----------------------|---|------------------|--------------------|
| • | Sunday | 18:00 – 19:00 | • | Wednesday | 8:30 – 9:00 |
| • | Monday | 8:00 – 9:00 | • | Thursday | 8:30 – 9:00 |
| • | Tuesday | 8:30 – 9:00 | • | Friday | 9:00 – 9:30 |

Outside these hours you may get information from the organizers, recognizable by their **green lanyards**.

Participants who paid late their fees are requested to provide a proof of payment during registration. In case you did not pay the fee before arriving, a POS unit will be available on the conference desk.

SOCIAL PROGRAMME

The **location and duration of each lunch/special dinner is indicated in the programme** and will also be displayed at the Registration desk. **Participants will receive tickets, which must be presented at the restaurant entrance.**

The social programme of the conference includes:

- ❖ A **WELCOME RECEPTION**, Monday, 29th of June, at **GATSBY restaurant**, starting 19:00.
- ❖ The **GALA DINNER**, Thursday, 2nd of July, will take place at **FOREST restaurant**, starting 20:00.

Due to the generous financial support of our sponsors, we are also able to offer you an excursion.

- ❖ **EXCURSION**, Wednesday, 1st of July, on one of the following locations:
 - **Prejmer Fortress - the best-preserved medieval fortress in Eastern Europe** (50 seats available, first come-first served based selection)
 - **Brasov city center** - medieval streets and spectacular mountain views.

The meeting point for excursion is in the hotel lobby, starting at 15:00, and the departure time is set at 15:30. Expected returning hour is 22:00 (buses will leave the city at 21:30).

Please make sure you are in time!

Participants are expected to register for preferred excursion. Click [here](#) to do so.

Registration is opened until Tuesday, 30th of June, lunch time.

Sunday, 28th of June

18:00 – 19:00

CONFERENCE REGISTRATION

Carpathian Hall

Monday, 29th of June

8:00 – 9:00

CONFERENCE REGISTRATION

Carpathian Hall

9:00 – 9:30

CONFERENCE OPENING

Morning session 1 -AI-Driven Optical and Energy Systems

Co-chairs: Nicu SCARISOREANU, Thomas LIPPERT

9:30 – 10:15	Plenary 1	Silke CHRISTIANSEN	Scale-Bridging Multi-Modal Analytics in Energy Research: Harnessing Data Correlation and Machine Learning for Enhanced Materials and Device Optimization
10:15 – 10:30	O-01	Alexandru CRACIUN	Software-in-the-Loop Simulation of an Adaptive-Optics Control Loop for a Multi-kW Laser Beam Delivery System
10:30 – 11:00	I-17	Virgil DUMA	Laser Scanning for Optimizing Optical Coherence Tomography-Based Imaging
11:00 – 11:30	COFFEE BREAK		

Morning session 2 – Ultrafast Laser Processing and Diagnostics

Co-chairs: Felix SIMA, Stefan STANCIU

11:30 - 12:00	I-02	Koji SUGIOKA	Ultra-high-Speed, Ultra-high-Aspect-Ratio Glass Through-Hole Drilling using a Single Ultrafast Bessel Pulse in GHz Burst Mode
12:00 – 12:30	I-03	Yves BELLOUARD	Three Decades of Innovation in Femtosecond Laser Functionalization of Glass Substrates: From Pioneer Works Reaching Industrial Maturity to Challenges and Opportunities
12:30 – 13:00	I-04	Olivier UTEZA	In-operando Sub-picosecond X-ray Diagnostics for High-Resolution Material Analysis and Imaging

13:00 – 14:30

LUNCH – TOSCA restaurant

Afternoon session 1 - Functional Materials for Energy Technologies

Co-chairs: Valentin CRACIUN, Catalin CONSTANTINESCU

14:30 – 15:00	I-05	Sergiu VATAVU	Chromogenic Coatings for Energy Efficient Windows
15:00 – 15:15	O-02*	Elena BANCU	Large-Area Pulsed Laser Deposition Growth of Transparent Conductive Al-Doped ZnO Thin Films
15:15 – 15:45	I-06	Fabio Di PIETRANTONIO	Advanced Functional Materials for Hydrogen Storage and Piezomagnetic Transduction
15:45 – 16:15	COFFEE BREAK		

Afternoon session 2 - Life Science Applications

Co-chairs: Silke CHRISTIANSEN, Olivier UTEZA

16:15 – 16:45	I-07	George SARAU	Correlative Spectroscopy and Microscopy Analysis of Micro- and Nanoplastics and Their Effects on Cells and Tissues
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Student Posters Pitch

16:45 – 16:50	P-01*	Cristina CRACIUN	Modelling the Growth of Tungsten Oxides Thin Films by Deposition of Aggregates Formed in Plasma
16:50 – 16:55	P-02*	Jonathan REID	Decoding Electron-CF ₄ Interactions in Plasma Processing
16:55 – 17:00	P-07*	Paul Wilhelm RAUECKER	Numerical Correlations of Temperature-Driven Modifications of Nanostructured Surfaces
17:00 – 17:05	P-13*	Beatrice PARASCHIV	High-Energy Pulsed Electron Beam-Induced Phase Transitions in a Plasma-Levitated Crystalline Dust Cluster
17:05 – 17:10	P-42*	Cristian ZAGAR	Reduced Graphene Oxide based Chemiresistive Sensors for Hydrogen Detection
17:10 – 17:15	P-44*	Andrei-Silviu ZANCU	ZnO based Chemoresistive Sensing Devices for Multipurpose Detection
17:15 – 17:20	P-45*	Elisa-Gabriela BROASCA	MgPc: C Chemiresistive Sensor for Detection of Inflammatory Gases at Room Temperature
17:20 – 17:25	P-92*	Ionut Petrisor UNGUREANU	Long-Range Interaction and Oscillation Control in Hanging Droplets

19:00 - 21:00

WELCOME RECEPTION – GATSBY restaurant

Tuesday, 30th of June

CONFERENCE REGISTRATION

8:30 – 9:00

Carpathian Hall

9:00 – 9:30

WORKSHOP OPENING CEREMONY

Morning session 3 - Advanced Materials and Devices

Joint session with 1st Workshop on National Innovation Ecosystems for Microelectronics and Photonics

Co-chairs: Fabio Di PIETRANTONIO, Yves BELLOUARD

9:30 – 10:00	I-08	Thomas LIPPERT	Thin Film Batteries Prepared by Physical Vapour Deposition (PVD) Methods
10:00 – 10:15	O-03	Camélia GHIMBEU	3D Printed Carbon Materials: Fabrication Challenges and Applications
10:15 – 10:30	O-04	Mihai ZAMFIR	Semi-industrial Level Manufacturing Process of Chemoresistive Gas Sensing Devices
10:30 – 11:00	I-09	Andrei MARDARE	Anodic Memristors: A new Generation of Nanoscale Devices for Memory and Artificial Synapse Applications

11:00 – 11:30

COFFEE BREAK

Morning session 4- Plasma Medicine

Co-chairs: Bogdana MITU, Kinga KUTASI

11:30 – 12:15	Plenary 2	Sander BEKESCHUS	The Promises and Challenges of Plasma Medicine and Oncology
12:15 – 12:30	O-05	M.S. ROOPESH	Application of Plasma Chill Spray Technology for Inactivation of Escherichia Coli Biofilms on Stainless Steel Surfaces
12:30 – 13:00	I-10	Ionut TOPALA	Advanced Monitoring of Air Non-Thermal Plasma Sources: Key Applications

13:00 - 14:30 LUNCH – TOSCA restaurant

Afternoon session 3 - Laser Materials

Co-chairs: Nicolaie PAVEL, Koji SUGIOKA

14:30 – 15:00	I-11	Daniel VIZMAN	Tailoring Optical Properties in Fluoride Crystals via Tb and Tm Incorporation
15:00 – 15:15	O-06	Lucian GHEORGHE	LaxNdyGdzYwSc _{4-x-y-z-w} (BO ₃) ₄ - LGYSB:Nd, a New High-Performance Near-Infrared Laser Crystal
15:15 - 15:30	O-07	Madalin GRECULEASA	Growth and Characterization of Bifunctional Nd:LGSB Crystals
15:30 – 16:00	I-12	Erik BECKERT	Packaging Technologies for Robust, Hybrid Laser Systems

16:00 – 16:30 COFFEE BREAK

16:30 – 18:00 POSTER SESSION 1
Co-chairs: Adrian PETRIS, Camélia GHIMBEU, Dani GALLART

Wednesday, 1st of July

CONFERENCE REGISTRATION

8:30 – 9:00

Carpathian Hall

Morning session 5 - Plasma and Laser-Based Materials for Biomedical Applications

Co-chairs: Ionut TOPALA, Fiorenza FANELLI

9:00 – 9:30	I-13	Hiromasa TANAKA	Plasma-Activated Liquids: From Fundamental Science to Biomedical Applications
9:30 – 9:45	O-08	Achim HASSEL	On the Stability of Passive Films on Dental Titanium Under Harsh Chemical and Physical Conditions
9:45 – 10:15	I-14	Kinga KUTASI	Plasma-Activated Colloids for Bioapplications: Characteristics of a Surface-Wave Microwave Discharge and Design of Laser Ablation in Liquid System
10:15 – 10:45	I-15	Catalin CONSTANTINESCU	Pulsed Laser Ablation in Liquids of MnZn Ferrites: From Green Synthesis to Sustainable Nanomagnetic Devices

10:45 – 11:15 COFFEE BREAK

Morning session 6 - Advanced Diagnostics, Imaging and Computational Physics

Co-chairs: Erik BECKERT, Virgil DUMA

11:15 – 11:45	I-16	Dani GALLART ESCOLA	Advancing Spherical Torus Proton–Boron Fusion: Physics, Technology, and AI-Enabled Control
11:45 - 12:00	O-09*	Ligia POMARJANSCHI	Gyrokinetic Validation Framework for Statistical Test-Particle Transport Models
12:00 – 12:15	O-10*	Irina BRADU	A Low-Cost, Open-Source Single-Photon Detection System
12:15 – 12:45	I-01	Stefan G. STANCIU	Advances in Scattering-Type Scanning Near-Field Optical Microscopy: From Quantitative and Correlative Nanoscale Characterization to AI-Enhanced Imaging

12:45 – 14:15 LUNCH – TOSCA restaurant

15:00 – 22:00 EXCURSION

Thursday, 2nd of July

CONFERENCE REGISTRATION

8:30 – 9:00

Carpathian Hall

Morning session 7 - Laser Nanostructuring and Nonlinear Optical Materials

Co-chairs: Fang YANG, Daniel VIZMAN

9:00 – 9:45	Plenary 3	Razvan STOIAN	Programmable Laser Nanostructuring
9:45 – 10:00	O-11	Adrian PETRIS	Near-Infrared Optical Limiting in the Novel Nonlinear Optical Compound DNA-Biopolymer - Spirulina Natural Dye
10:00 – 10:15	O-12	Alin BROASCA	Efficient Diode-Pumped Laser Operation in Nd-doped LYSB Nonlinear Optical Crystal
10:15 – 10:45	I-18	Xxx SEDAO	Ultrafast Laser for Biomimetic Surfaces and Their Applications
10:45 – 11:00	O-19	Alexei ZUBAREV	PW-class Laser: Compact Electron Accelerator and High-Peak Power THz Source
11:00 – 11:30 COFFEE BREAK			

Morning session 8 - Optical Imaging and Cancer Theranostics

Co-chairs: Xxx SEDAO, Hiromasa TANAKA

11:30 - 12:00	I-19	Daniel FARKAS	Biomedical Optical Imaging for Translational Diagnostics and Treatment: From 3D Optical Biopsies to Pixel-precision Laser Theranostics
12:00 – 12:15	O-13*	Alexandra BRAN	Two Photon Polymerization of 3D Porous Structures for Evaluation of X-ray Radiation Effect on Cancer Cells
12:15 – 12:30	O-14	Tatiana TOZAR	In situ Optical Monitoring of UV-crosslinked Hydrogels for the Controlled Delivery of Motexafin Lutetium in Breast Cancer Phototheranostics
12:30 – 13:00	I-20	Fang YANG	Metal-Doped Functional Nanoprobes for Multimodal Imaging-Guided Synergistic Tumor Theranostics
13:00 - 14:30 LUNCH – TOSCA restaurant			

Afternoon session 4 - Plasma Surface Engineering and Environmental Sensing

Co-chairs: Eva KOVACEVIC, Martin CADA

14:30 – 15:00	I-21	Fiorenza FANELLI	Advancing Atmospheric Pressure Plasma Surface Engineering for Environmental and Catalytic Applications
15:00 – 15:15	O-15	Rosalba GAUDIUSO	Nanostructured Sensing Platforms for Trace Element Analysis via Laser-Induced Breakdown Spectroscopy (LIBS)
15:15 - 15:45	I-22	Paula NAVASCUÉS	Catalytic Plasma Coatings for Remediation Challenges within the Planetary Boundaries Framework
15:45 – 16:15 COFFEE BREAK			

POSTER SESSION 2

16:15 – 17:45

Co-chairs: Andrei MARDARE, Angela STAIKU, Paula NAVASCUÉS

20:00 – 24:00

Gala Dinner – FOREST restaurant

Friday, 3rd of July

CONFERENCE REGISTRATION

9:00 – 9:30

Gatsby Hall

Morning session 9 - High-Power Laser

Co-chairs: Razvan STOIAN, Gabriel SOCOL

9:30 – 9:45	O-16	Aurelian MARCU	ZnO Nanowire on Thick Targets in Laser Particle Acceleration
9:45 – 10:00	O-17	Valentin CRACIUN	Development of Ultra-Low Density Foam Targets to Enhance fs-Laser-Plasma Coupling
10:00 – 10:15	O-18	Liviu NEAGU	Laser-Driven Gamma Irradiation for Industrial Imaging First-Stage Station: Concept, Setup & Experimental Validation
10:15 – 10:30	O-20*	Cecilia OANCA	Coherent Beam Combination of Two Terrawatt Femtosecond Laser Pulses
10:30 – 10:45	O-21	Razvan DABU	Advanced Techniques for Coherent Beam Combination of High-Power Ultrashort Laser Pulses

10:45 – 11:15

COFFEE BREAK

Morning session 10 - Materials Engineering

Co-chairs: Achim HASSEL, Sergiu VATAVU

11:15 – 11:45	I-23	Martin ČADA	Process Characterisation of High-Entropy Transition Metal Disulphides Deposited by R-HiPIMS in H ₂ S Atmosphere
11:45 - 12:00	O-22	Stefan IRIMICIUC	Engineering High-Entropy Alloy Thin Films by Pulsed Laser Deposition for Tunable Microwave Absorption
12:00 – 12:30	I-24	Eva KOVACEVIC	Low Temperature Plasmas for 2D and 3D Materials

12:30 – 12:45

Conference Closing Ceremony & Awards

12:45 – 14:15

LUNCH – TOSCA restaurant

POSTER SESSION 1

Tuesday, 30th of June, 16:30 - 18:00

Co-chairs: Adrian PETRIS,
Camélia GHIMBEU, Dani GALLART

Fundamentals, Diagnostics and Modelling in Laser, Plasma and Radiation Physics

P-01*	Cristina CRACIUN	Modelling the Growth of Tungsten Oxides Thin Films by Deposition of Aggregates Formed in Plasma
P-02*	Jonathan REID	Decoding Electron-CF ₄ Interactions in Plasma Processing
P-03	Adrian SCURTU	Thermal and Chemical Choking in Pulsed Plasma CO ₂ Dissociation: Mitigation Through Volumetric Expansion
P-04	Teddy CRACIUNESCU	Multifractal Analysis for Fusion Plasma Disruption Prediction
P-05	Andreea GROZA	Deuterium Desorption from Tungsten Layer by Laser-Based Methods
P-06	Radu SAPUNARU	Microscopic Insights into the Limitations of the Decorrelation Trajectory Method
P-07*	Paul Wilhelm RAUECKER	Numerical Correlations of Temperature-Driven Modifications of Nanostructured Surfaces

P-08	Claudiu HAPENCIUC	Quantitative Nanoscale Thermal Conductivity Measurements using DC Scanning Thermal Microscopy
P-09	Alexandra Maria Isabel TREFILOV	Influence of Thermal Relaxation Time on the Improved Generalized Bioheat Equation: A Comparative Analytical-Numerical Study
P-10	Valentin NICULESCU	Humphreys α -Line in H-I and the Solar Spectra via Quantum Spectral-Model
P-11	Simona BRAJNICOV	Early-Time Dynamics in Polymer and Metal LIFT
P-12	Nicoleta UDREA	Quantitative Imaging of Regolith Ejection Dynamics under Electron Beam Exposure
P-13*	Beatrice PARASCHIV	High-Energy Pulsed Electron Beam-Induced Phase Transitions in a Plasma-Levitated Crystalline Dust Cluster
P-14	Maria-Luiza MITU	Machine Learning-Based Prediction of Microparticle Dynamics in Externally Driven Strongly-Coupled Dusty Plasmas
P-15	Georgian-Razvan UNGUREANU	Towards ML-Stabilized Coherent Beam Combining using Single-Shot Complex Characterization of Ultrashort Laser Beam Pulses
P-16	Alexandru MIHALCEA	Real-Time Beam Pointing Control System Design for CETAL-PW Front-End Laser
P-17	Valentin CRACIUN	High-Energy (Joule-Level) Pulse Post-Compression for Ultrafast Laser - Plasma Applications
P-18	Darius-Adrian VESTEA	Study of Giant Electro-Magnetic Pulses in Laser-Thin Foil Interactions at Varying Laser Powers at PW Regime

Advances in Optics, Laser and Photonics

P-19	Virgil-Florin DUMA	Study of Laser Scanners with Rotational Refractive Polygons
P-20	Ana DINCA	Optical Path Control using Quadrature Signal Detection
P-21	Diana-Ioana COSAC	Error Analysis of a Metrology System for LISA
P-22	Mihai SERBANESCU	Development of a Control System of a Laser Source for ns Emission Spectral Detection of Hydrogen and Deuterium Incorporated in Boron Deuterium Layers
P-23	Petronela GHEORGHE	Ultrathin MoS ₂ Layers for Applications in Sensing and Photonics
P-24	Cristian MILOS	In-Situ and Real Time Measurement of Laser Induced Damage Threshold of Metallic Thin Films used for ns and fs-Laser Mirrors
P-25	Valentin CRACIUN	Investigation of Cleaning of Laser Carbonized Mirrors by Wet Washing Procedures
P-26	Catalina Alice SUSALA	Exploring Direct Diode Pumping Advantages - the Case of Nd:LGSB Laser Crystal
P-27	Catalina Alice SUSALA	Self Q-switched Mode-Locked Laser Operation of Nd:LGSB Crystal under Direct Pumping
P-28	Flavius VOICU	Fabrication and Laser Performance of Multilayered Yb ³⁺ :Y ₂ O ₃ Transparent Ceramics
P-29	Cristina GHEORGHE	Photoluminescence Investigation and Up-Conversion Behavior Under Different Excitation Wavelengths of (Er, Tm, Yb) Doped CdF ₂ Single Crystal
P-30	Cristina GHEORGHE	A Multimodal Temperature Sensing Based on Up-Conversion Luminescence of (Er, Y) Co-Doped Fluorite Crystals

P-31	Cristina GHEORGHE	Upconversion Properties and Optical Temperature-Sensing Performance in the Visible and Near-Infrared Region Based on Luminescence Intensity Ratio in a New Er ³⁺ : SrLaGaO ₄ Phosphor
P-32	Ana-Maria VOICULESCU	Excited-state absorption in low-concentrated Er: SrLaGaO ₄ ceramic phosphors
P-33	Ana-Maria VOICULESCU	Dynamics of Excited States ⁴ I _{13/2} and ⁴ I _{11/2} of Er ³⁺ in Ca: CdF ₂
P-34	Cristina TIHON	Influence of Vacuum Sintering on the Microstructure and Spectroscopic Properties of Eu ³⁺ - Doped SrTiO ₃ Ceramics
P-35	Catalina STANCIU	Controlled Synthesis and Spectroscopic Investigation of Eu-doped SrTiO ₃ Ceramics
P-36	Ana-Maria VOICULESCU	Eu ³⁺ - Doped BiTa ₇ O ₁₉ : A New Red Phosphor
P-37	George STANCIU	Inhomogeneous Line Broadening in Y ₂ O ₃ Laser Ceramics
P-38	George Tony CONSTANTIN	Influence of Cerium on Radiation-Induced Attenuation in Long-Period Gratings (LPG) and Fiber Bragg gratings (FBG) Optical Fiber Sensors
P-39	Alexandru CRACIUN	Thermal Management of High-Power Laser Diodes using Optimized Microchannel Cooling Plate

Energy Production and Storage

P-67	Cristina CRACIUN	Tailored WO ₃ -Based Heterostructures for Electrochromic Applications
P-68	Mihaela FILIPESCU	Tailoring Nanostructured WO ₃ Thin Films for Transparent Electrode Applications
P-69	Alexandra Maria Isabel TREFILOV	Hybrid Proton-Exchange Membrane Architecture Combining Perfluorosulfonated Polymers with a Resorcinol-Formaldehyde Hydrogel Network for Energy-Efficient PEM Fuel Cell Applications
P-70	Sorin VIZIREANU	Deposition of Boron Layers by PECVD at Low and High Deposition Rates using Diborane as Precursor
P-71	Claudiu Teodor FLEACA	Synthesis of Nanostructured Materials (Fe ₂ O ₃ /SiO) for Nanofluids as Heat Transfer Agents
P-72	Claudiu Teodor FLEACA	New Complex Nanofluids Based on Laser Pyrolysis Synthesized Si-SiC Nanoparticles and Natural Aluminosilicate Short Nanotubes

Life Sciences Applications

P-84	Diana-Elena DRAGHICI	Nanocomplexes for X-Ray-Activated Photodynamic Therapy
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POSTER SESSION 2

Thursday, 2nd of July, 16:15 - 17:45

**Co-chairs: Andrei MARDARE,
Angela STAIKU, Paula NAVASCUÉS**

Environmental Protection and Pollutants Monitoring

P-40	Iulia ANTOHE	Hydrogen Gas Detection using a Fiber-Optic-Based Plasmonic Sensor
P-41	Gianina POPESCU-PELIN	Pulsed Laser Deposited AZO and Al ₂ O ₃ /AZO Coatings for H ₂ Selective Gas Sensor Structures
P-42*	Cristian ZAGAR	Reduced Graphene Oxide based Chemiresistive Sensors for Hydrogen Detection

P-43	Luiza Izabela TODERASCU	Influence of ZnO-based Nanostructure Morphology on Gas Sensing Performance
P-44*	Andrei-Silviu ZANCU	ZnO based Chemoresistive Sensing Devices for Multipurpose Detection
P-45*	Elisa-Gabriela BROASCA	MgPc: C Chemiresistive Sensor for Detection of Inflammatory Gases at Room Temperature
P-46	Andrei STOCHIOIU	Room-Temperature Chemiresistive Ammonia Sensor: Electron Beam Irradiation for Enhanced Performance
P-47	Gabriel SOCOL	Development of Laser-Reduced Graphene Oxide (rGO) Sensors for Gas Detection
P-48	Mihai SOPRONYI	ABO ₃ Thin Films for SAW Sensors
P-49	Andrei-Silviu ZANCU	Influence of Gas-Phase Parameters on the Properties of TiO ₂ Nanopowders Synthesized by Laser Pyrolysis
P-50	Iulia ANTOHE	Polyoxometalate-Functionalized Optical Fiber SPR Sensors for Detection of Organic Pollutants in Aqueous Media
P-51	Adriana SMARANDACHE	Engineered Laser Photodegradation: A Promising Strategy for Mitigating Micro- and Nanoplastic Pollution in Aquatic Environments
P-52	Cristian UDREA	Heavy Metals Detection in Soil by Terahertz - Time Domain Spectroscopy Method

Devices Based on Photonic and Plasma Technologies

P-53	Dorin MOLOVATA	Real-Time Spatio-Temporal Measurement of Electromagnetic Field using Magneto-Optical Crystals
P-54	Nicoleta ENEA	Versatile Pixelated Scintillators: Advancing Medical and Industrial Performance
P-55	Carmen BREAZU	Organic Light Emitting Transistors based on Organic Semiconductors and Nanostructured Dielectric Interface
P-56	Marcela SOCOL	Indium Tin Oxide Films Prepared on Patterned Flexible Substrates by Pulsed Laser Deposition
P-57	Stefan Andrei IRIMICIUC	Development of Broadband Dielectric Mirrors Based on HfO ₂ and ZrO ₂ coatings
P-58	Mihaela FILIPESCU	Vanadium Dioxide Thin Films for Adaptive Infrared Stealth
P-59	Mihaela FILIPESCU	A comparative study of Vanadium Oxides Deposited by PLD for Infrared Stealth
P-60	Daniela DOBRIN	The Influence of Angular Anisotropy in Pulsed Electron Beam Deposition on Oxide Thin Films Growth
P-61	Nicu SCARISOREANU	Functional Oxide Heterostructures: Structure-Property Correlations and Interface-Driven Phenomena
P-62	Marius-Teodor MOCANU	Effect of Nitrogen Content on Physical and Mechanical Properties of Tantalum Nitride Films
P-63	Cristian LUNGU	Carbon-Metal Composite Coatings Obtained by DC Sputtering
P-64	Iuliana URZICA	Morphological Transfer of Superhydrophobic Features from Laser-Ablated Metallic Molds to Flexible Polymer Replicas
P-65	Natalia MIHAILESCU	Microwave Plasma-Synchronized Co-Vaporization Enables Plasmon-Free, Interface-Dominated Optical Response at Sub-Percent Metal Loadings
P-66	Bogdana MITU	Evaluation of a DBD Linear Plasma Source for Pest Control

Life Sciences Applications

P-73	Laurentiu RUSEN	Ceramic-Composites Surfaces for Pareodontal Applications
P-74	Andreea GROZA	Physicochemical Properties of Calcium Phosphate - Poly(methyl methacrylate) Composite Layers Produced by Radio Frequency Magnetron Sputtering Technique
P-75	Gabriela DORCIOMAN	Influence of Selenium Doping on the Mechanical Properties, Wettability, Dissolution Resistance, and in Vitro Apatite-Forming Ability of Pulsed Laser Deposited Biogenic Calcium Phosphate Thin Films
P-76	Oana GHERASIM	Biofunctional Oxide Coatings for the Surface Modification of Alloy-based Implants
P-77	Emanuel AXENTE	Picosecond Laser-Induced Periodic Surface Structures on TiAl ₆ V ₄ : Dual-Functionalization for Metallic Implants
P-78	Claudiu Teodor FLEACA	Influence of the Sensitizer in the Synthesis Process of Iron Oxide Nanoparticles Obtained by Laser Pyrolysis
P-79	Nicu SCARISOREANU	Multifunctional Ultra-Small Nanoparticles: Antimicrobial Action and Photocatalytic Performance
P-80	Ion Cosmin CALINA	In Vitro Optimization of Bioactive Concentrations of Standardized Aloe Vera Extract for Skin Regeneration
P-81	Anca SCARISOREANU	Electron-Beam Crosslinked Gelatin-Dextran Hydrogels Incorporating Standardized Aloe Vera Extract for Biomimetic Wound Healing Applications
P-82	Claudiu HAPENCIUC	Laser- Functionalized Nanofibrous Scaffolds for Wound Healing Applications
P-83	Angela STAIKU	Laser-Driven X-Ray Photodynamic Therapy
P-85	Ionut Petrisor UNGUREANU	OncoBreast - Molecular Similarity Search for Breast Cancer Drug Research
P-86	Tatiana TOZAR	In Silico Evaluation of Radium-223 Energy Deposition and DNA Double-Strand Break Induction in Human Cells
P-87	Simona BRAJNICOV	Laser-Engineered Porosity in Transparent CuI-PDMS Composite Films
P-88	Valentina Carmen DINCA	Biointerfaces Designed for Modulating Cellular Response
P-89	Maria DEMETER	Kinetic Modelling of Chemotherapeutic Drug Release from Radiation-Crosslinked Hydrogels for Wound Dressing Applications
P-90	Marina CUZMINSCHI	Graphene/Metal Composite Sensor for Cortisol Detection: DFT Simulation and Experimental Implementation.
P-91	Valentin NICULESCU	An Estimation of Lifetime for the Pulsatory Liposome
P-92*	Ionut Petrisor UNGUREANU	Long-Range Interaction and Oscillation Control in Hanging Droplets
P-93	Ionut Petrisor UNGUREANU	Two Drops, Zero Gravity: Capillary Bridge Dynamics on the International Space Station



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CONFERENCE LOCATION & TRAVEL

The conference will be held at the Alpin Resort Hotel, Poiana Brasov, Romania, in the middle of the Carpathian Mountains. For information regarding transportation from Bucharest Henri Coandă Airport to Alpin Resort Hotel in Poiana Braşov, participants are kindly asked to consult the conference webpage: <https://iclpr-st.inflpr.ro/conference-venue/>.

ACCOMMODATION

Please check the hotel website for details regarding the accommodation types and facilities at the conference hotel: <https://hotelalpin.ro/en/accommodation/>. The Alpin Resort Hotel will ensure all the requests from the ICLPR-ST participants. All hotel guests benefit from free access to the indoor semi-Olympic pool, sauna, jacuzzi and fitness room, free valet parking, 24/7 concierge service, and special 15% discounts for the escape rooms and Vitarium SPA body therapies.

Other accommodation options are available in Poiana Brasov, Brasov city or around.

FINAL USEFUL INFORMATION

Time: East European Time zone EET (UTC + 2; or UTC + 3 summer time)

Electricity: Romania operates on a 230-volt, 50 Hz electrical system, using Type C and Type F plugs common throughout Europe.

Currency: Romania's official currency is the Romanian leu (RON). All official transactions and day-to-day business use the leu. Expected exchange rates listed by the National Bank of Romania (BNR) at the middle of June 2026 are approximately 1 EUR = 5.23 – 5.24 RON and 1 USD = 4.51 -4.52 RON. Commercial banks have higher exchange rates.

Weather: At the end of June, **Poiana Braşov** usually offers pleasant mountain weather, with mild daytime temperatures of around **18-23 °C** and cooler evenings and nights, often around **9-13 °C**. The fresh mountain air and green Carpathian landscape make this period suitable for outdoor activities, walking, and informal sightseeing. As early summer in the mountains can also bring occasional rain or showers, participants are advised to bring comfortable shoes, a light jacket or sweater for the evening, and a small umbrella or raincoat.

Emergency calls

In the case of any urgent or emergency situation—whether you require police, fire, or medical assistance - dial national **emergency number 112**. The service can be called regardless of your operator and even without a SIM card, also if the phone is locked or has no credit. In addition to Romanian, the calls are answered in English, French, Hungarian, German, Italian, Spanish and Russian, depending on the call center.

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3rd International Conference on Laser, Plasma and Radiation Science and Technology

Poiana Brasov, Romania, 29 June - 3 July, 2026

EEST Time = GMT + 3	Monday, 29th June	Tuesday, 30th June	Wednesday, 1st July	Thursday, 2nd July	Friday, 3rd July	EEST Time = GMT + 3		
8:00 - 8:15	REGISTRATION*					8:00 - 8:15		
8:15 - 8:30						8:15 - 8:30		
8:30 - 8:45		REGISTRATION	REGISTRATION	REGISTRATION		8:30 - 8:45		
8:45 - 9:00						8:45 - 9:00		
9:00 - 9:15	CONFERENCE OPENING CEREMONY	WORKSHOP OPENING CEREMONY	I-13 Hiromasa TANAKA	Plenary 3 Razvan STOIAN	REGISTRATION	9:00 - 9:15		
9:15 - 9:30						9:15 - 9:30		
9:30 - 9:45	Plenary 1 Silke CHRISTIANSEN	I-08 Thomas LIPPERT	O-08 A. Hassel	O-11 A. Petris	O-16 A. Marcu	9:30 - 9:45		
9:45 - 10:00		O-03 C. Ghimbeu	I-14 Kinga KUTASI	O-12 A. Broasca	O-17 V. Craciun	9:45 - 10:00		
10:00 - 10:15	O-01 A. Craciun	O-04 M. Zamfir	I-15 Catalin CONSTANTINESCU	I-18 Xxx SEDAO	O-18 L. Neagu	10:00 - 10:15		
10:15 - 10:30						O-20 C. Oanca	10:15 - 10:30	
10:30 - 10:45	I-17 Virgil DUMA	I-09 Andrei MARDARE	COFFEE BREAK	O-19 A. Zubarev	COFFEE BREAK	10:30 - 10:45		
10:45 - 11:00							10:45 - 11:00	
11:00 - 11:15	COFFEE BREAK	COFFEE BREAK	I-15 Dani GALLART	COFFEE BREAK	I-23 Martin CADA	11:00 - 11:15		
11:15 - 11:30								11:15 - 11:30
11:30 - 11:45	I-02 Koji SUGIOKA	Plenary 2 Sander BEKESCHUS	O-09 L. Pomarjanschi	I-19 Daniel FARKAS	O-22 S. Irimiciuc	11:30 - 11:45		
11:45 - 12:00								11:45 - 12:00
12:00 - 12:15	I-03 Yves BELLOUARD	O-05 M. S. Roopesh	O-10 I. Bradu	O-13 A. Bran	I-24 Eva KOVACEVIC	12:00 - 12:15		
12:15 - 12:30				O-14 T. Tozar		12:15 - 12:30		
12:30 - 12:45	I-04 Olivier UTEZA	I-10 Ionut TOPALA	I-01 Stefan G. STANCIU	I-20 Fang YANG	Closing Ceremony & Awards	12:30 - 12:45		
12:45 - 13:00							12:45 - 13:00	
13:00 - 14:15	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	13:00 - 14:15		
14:15 - 14:30						14:15 - 14:30		
14:30 - 14:45	I-05 Sergiu VATAVU	I-11 Daniel VIZMAN	Excursion 15:00 - 22:00	I-21 Fiorenza FANELLI	POSTER SESSION 2	14:30 - 14:45		
14:45 - 15:00							14:45 - 15:00	
15:00 - 15:15	O-02 E. Bancu	O-06 L. Gheorghe				O-15 R. Gaudioso		15:00 - 15:15
15:15 - 15:30	I-06 Fabio di PIETRANTONIO	O-07 M. Greculeasa				I-22 Paula NAVASCUES		15:15 - 15:30
15:30 - 15:45		I-12 Erik BECKERT						15:30 - 15:45
15:45 - 16:00	COFFEE BREAK							15:45 - 16:00
16:00 - 16:15		COFFEE BREAK						16:00 - 16:15
16:15 - 16:30	I-07 George SARAU							16:15 - 16:30
16:30 - 16:45								16:30 - 16:45
16:45 - 17:00	Poster Pitch Session	POSTER SESSION 1						16:45 - 17:00
17:00 - 17:15						17:00 - 17:15		
17:15 - 17:30						17:15 - 17:30		
17:30 - 17:45						17:30 - 17:45		
17:45 - 18:00						17:45 - 18:00		
Social events	Welcome Reception 19:00 - 21:00			Conference Dinner 20:00 - 24:00		Social events		

*Registration desk will be open as well on SUNDAY, 28th of June, from 18:00 - 19:00.



WARNING! Please note that Poiana Braşov is located in a mountain area where **brown bears are often present**, including near forested zones and occasionally close to tourist areas. **Participants are advised not to walk deep into the woods, especially alone or after dark, and to remain on marked paths and populated areas.**

DO NOT APPROACH, FEED, PHOTOGRAPH FROM CLOSE RANGE, OR FOLLOW WILD ANIMALS!

In case of a bear encounter, stay calm, do not run, and slowly move away while keeping distance.